AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A multi-mode scheduler including a N x kM scheduler for adjusting data transmission between N-pieces of input interface sections, where [[said]] N is a positive integer, and said km-pieces of output interface sections, where said M is a positive integer and said k is an integer not less than two, said multi-mode scheduler comprising:

k-pieces of N x M schedulers to be said N x kM scheduler; and

(k-1) -pieces of selection circuits for switching allocated output port information input from an outside of said N x kM scheduler and information from one of said N x M schedulers at a front step so as to be input to another one of said N x M schedulers as allocated output port information[[:]];

wherein an operation of said N x kM scheduler or an operation of said N x M schedulers having k-pieces of priority classes is set freely with switching operation of said (k-1) -pieces of selection circuits.

2. (currently amended): The multi-mode scheduler according to Claim 1, wherein j-pieces of said N x kM scheduler, [[(]]where j is an integer not less than two[[)]], are connected so

as to make up [[said]] a jN x kM scheduler when said allocated output port information input from said outside is used.

3. (original): The multi-mode scheduler according to Claim 2, wherein each of said (k-1)-pieces of selection circuits selects said allocated output port information input from said outside when said allocated output port information input from said outside is used.

4. (currently amended): The multi-mode scheduler according to Claim 2, wherein j-pieces of said N x kM scheduler are pipeline-connected so as to make up said jN x kM scheduler ~~(where j is an integer not less than two)~~.

5. (currently amended): The multi-mode scheduler according to Claim 1, wherein said N x kM scheduler is used alone so as to make up said N x M schedulers having k-pieces of priority classes when information from said N x M scheduler at said front step is used.

6. (currently amended): The multi-mode scheduler according to Claim 5, wherein each of said (k-1)-pieces of selection circuits selects information from one of said N x M schedulers at said front step when said N x kM scheduler is used alone.

7. (currently amended): The multi-mode scheduler according to Claim 1, wherein each of said N-pieces of input interface sections includes a virtual output queue[[)]] buffer for storing reception data for each output interface section to be a destination.

8. (currently amended): A multi-mode scheduler including a N x kM scheduler for adjusting data transmission between N-pieces of input interface means, where [[said]] N is a positive integer, and said kM-pieces of output interface means, where said M is a positive integer and said k is an integer not less than two, said multi-mode scheduler comprising:

k-pieces of N x M schedulers to be said N x kM scheduler; and

(k-l)-pieces of selection means for switching allocated output port information input from an outside of said N x kM scheduler and information from one of said N x M schedulers at a front step so as to be input to another one of said N x M schedulers as allocated output port information[[:]];

wherein an operation of said N x kM scheduler or an operation of said N x M schedulers having k-pieces of priority classes is set freely with switching operation of said (k-1) -pieces of selection means.

9. (currently amended): The multi-mode scheduler according to Claim 8, wherein j-pieces of said N x kM scheduler, [[(]]where j is an integer not less than two[[)]], are connected so

as to make up [[said]] a jN x kM scheduler when said allocated output port information input from said outside is used.

10. (original): The multi-mode scheduler according to Claim 9, wherein each of said (k-1) -pieces of selection means selects said allocated output port information input from said outside when said allocated output port information input from said outside is used.

11. (currently amended): The multi-mode scheduler according to Claim 9, wherein j-pieces of said N x kM scheduler are pipeline-connected so as to make up said jN x kM scheduler ~~(where j is an integer not less than two)~~.

12. (currently amended): The multi-mode scheduler according to Claim 8, wherein said N x kM scheduler is used alone so as to make up said N x M schedulers having k-pieces of priority classes when information from said N x M scheduler at said front step is used.

13. (currently amended): The multi-mode scheduler according to Claim 12, wherein each of said (k-1)-pieces of selection means selects information from one of said N x M schedulers at said front step when said N x kM scheduler is used alone.

14. (currently amended): The multi-mode scheduler according to Claim 8, wherein each of said N-pieces of input interface means includes a virtual output queue[[)]] buffer for storing reception data for each output interface means to be a destination.

15. (currently amended): An apparatus including a multi-mode scheduler including a N x kM scheduler for adjusting data transmission between N-pieces of input interface sections, where N is a positive integer, and kM-pieces of output interface sections, where M is a positive integer and k is an integer not less than two, ~~said multi-mode scheduler~~ comprising:

k-pieces of N x M schedulers to be said N x kM scheduler; and

(k-1) -pieces of selection circuits for switching allocated output port information input from an outside of said N x kM scheduler and information from one of said N x M schedulers at a front step so as to be input to another one of said N x M schedulers as allocated output port information[[:]];

wherein an operation of said N x kM scheduler or an operation of said N x M schedulers having k-pieces of priority classes is set freely with switching operation of said (k-1) -pieces of selection circuits.

16. (currently amended): An apparatus including a multi-mode scheduler including a N x kM scheduler for adjusting data transmission between N-pieces of input interface means,

where N is a positive integer, and kM-pieces of output interface means, where M is a positive integer and k is an integer not less than two, ~~said multi-mode scheduler~~ comprising:

k-pieces of N x M schedulers to be said N x kM scheduler; and

(k-1)-pieces of selection means for switching allocated output port information input from an outside of said N x kM scheduler and information from one of said N x M schedulers at a front step so as to be input to another one of said N x M schedulers as allocated output port information[[:]];

wherein an operation of said N x kM scheduler or an operation of said N x M schedulers having k-pieces of priority classes is set freely with switching operation of said (k-1)-pieces of selection means.

17. (currently amended): A multi-mode scheduling method used in a N x kM scheduler for adjusting data transmission between N-pieces of input interface means, where N is a positive integer, and kM-pieces of output interface means, where M is a positive integer and k is an integer not less than two, ~~said multi-mode scheduler~~ comprising:

forming said N x kM scheduler from k-pieces of N x M schedulers ~~to be said N x kM scheduler~~; and

switching, in (k-1)-pieces of selection circuits, ~~for switching~~ allocated output port information input from an outside of said N x kM scheduler and information from one of said N

x M schedulers at a front step so as to be input to another one of said N x M schedulers as allocated output port information[[:]];

wherein an operation of said N x kM scheduler or an operation of said N x M schedulers having k-pieces of priority classes is set freely with switching operation of said (k-1) -pieces of selection circuits.